



B-hyve Training 2018

Bluetooth vs. Wi-Fi

What are the differences?

Why would you choose one over the other?

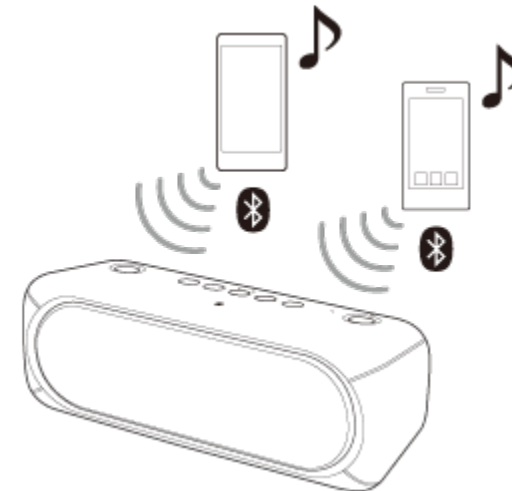
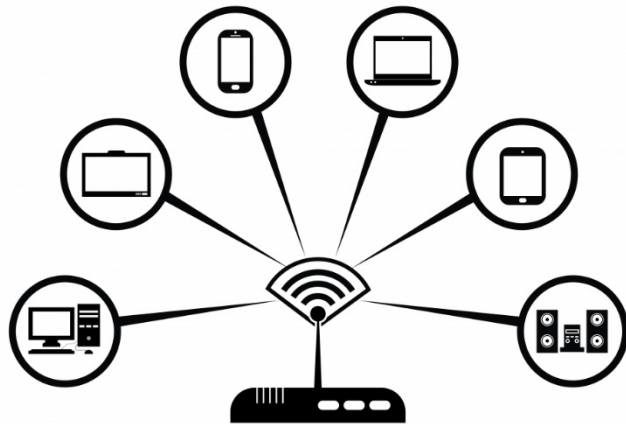
What are potential issues in each?

When are these used within the B-hyve applications?

What is the difference?



Bluetooth and Wi-Fi are both methods that provide wireless communication, but the difference between the two mainly stems from what they are designed to do and how they are used. The main difference is that Bluetooth is used to connect devices without using cables, while Wi-Fi provides high-speed access to the internet.



Bluetooth

Bluetooth acts as a cord between two devices by creating a secure, wireless personal area network in which two devices can communicate. Bluetooth was meant for portable equipment. Its great when you need to connect two devices with minimal configuration.



Bluetooth



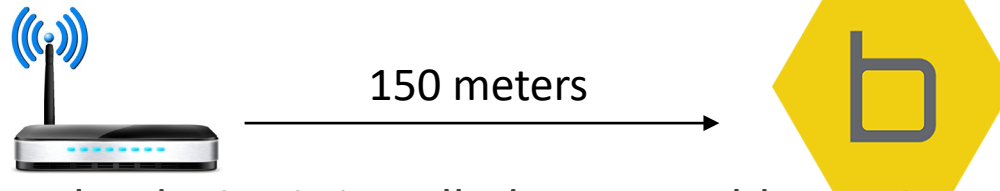
Wi-Fi

Wi-Fi serves to wirelessly connect devices to internet networks, meaning once the device is on a network, you can communicate with it from wherever you have access to the internet. Wi-Fi was meant to replace high-speed cables, so it takes some setting up, but supports high bandwidth.

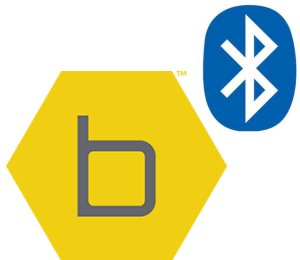


Why would you choose one over the other?

If you are away from home, you would have to use Wi-Fi, because your Bluetooth signal won't reach. Bluetooth range is typically 30' (10 meters), but depending on the device, can reach up to 200' (61 meters). Wi-Fi signals are typically much larger and you can install the devices further away from the router or hotspot.



If you don't have internet at the place the device is installed, you would use Bluetooth. For example, a new home without Internet.



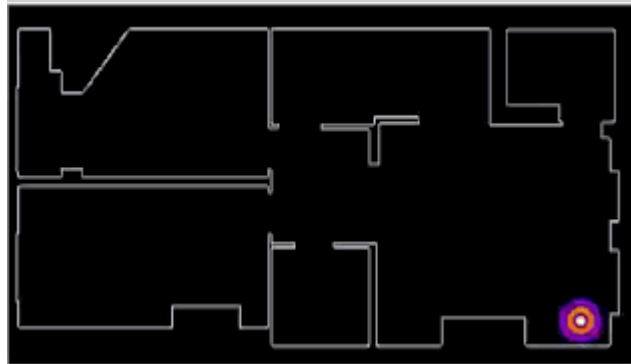
There is no Internet Connection



Possible Wi-Fi Issues or Barriers

Physical Barriers – Typically routers can broadcast signals fairly far, but any wall or door can reduce your signal strength greatly.

Range – Your router can only broadcast so far, installing products too far away will result in a poor or no connection, and you won't be able to use Wi-Fi at all.



Wi-Fi issues continued.

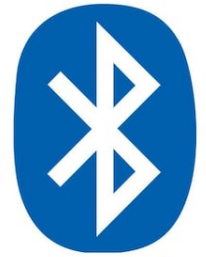
Router Speed – Your router may be old, slow, or not broadcasting the correct signal.

Connection – Your internet connection could be slow or even out. You may also be using the wrong connection type. 5 GHz provides faster data rates at a shorter distance, while 2.4 is slower but gives further distances.



Interference – A lot of devices use 2.4 connections, and having too many can cause interference. Some known devices to cause this interference would be microwaves, baby monitors, cordless phones, and garage door openers.

What are some barriers in Bluetooth?



Physical Barriers – most often metal objects like metal doors, filing cabinets, or refrigerators.

The primary issue you see in Bluetooth is Range. You can't get too far away from your product, or you will lose connection.

Some devices require a specific version of Bluetooth in order to communicate. B-hyve, for instance, requires Bluetooth 4.0 and higher.

Your phone can only connect to so many Bluetooth signals at a time, too many can cause interference or slowed connection.



When are these used in B-hyve?

WT 25 Indoor/Outdoor Timer – Gen 1 does not have Bluetooth capabilities, so you will only use Wi-Fi. Gen 2 uses both. Bluetooth is used in Pairing the device, and would be used if you don't have an internet connection. Bluetooth can be turned on at any point.



WT24 Indoor Timer

WT24 Indoor Timer – Pairing uses Bluetooth to connect to the device, and then you input Wi-Fi password. Bluetooth can be turned on at any point and you can control your timer via Bluetooth only if you'd like.



BH1

BH1 B-hyve Wi-Fi Hub uses Bluetooth to speak with the Hose Faucet timers and in pairing, but uses Wi-Fi to communicate with our servers. This device cannot be controlled in the app, therefore no Bluetooth connection can be turned on.



HT25

HT25 Hose Faucet Timer – Uses **only** Bluetooth. No Wi-Fi chip built into the device. This requires a B-hyve hub to communicate over the internet. Bluetooth connection can be established at any point.

